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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------|
| 09/890,929 | 08/07/2001 | Yasuyuki Nozaki | 033808/027 8 | 1895 |
| 7590 | 02/25/2004 | | EXAMINER | |
| Stanley P. Fisher REED SMITH LLP 3110 Fairview Park Drive Suite 1400 Falls Church, VA 22042 | | | CLOW, LORIA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1631 | |
| | | | DATE MAILED: 02/25/2004 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|-------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/890,929 | NOZAKI ET AL. | |
| | Examiner Lori A. Clow, Ph.D. | Art Unit 1631 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 November 2003.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-15 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>16 Sept. 2003; 19 December 2003</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' arguments, filed 24 November 2003, have been fully considered but are not deemed fully persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Claims 1-15 are currently pending.

Information Disclosure Statement

The Information Disclosure Statements filed 16 September 2003 and 19 December 2003 have been considered. A signed copy of forms PTO 1449 are included with this Office Action. Applicant is advised that the cited foreign patent documents have been considered only to the extent of the abstracts, which were provided in English.

Claim Objections

Claims 1-15 objected to because of the following informalities:

Claim 1 recites "based on a set of data obtained by experiments of the plurality types". The language is confusing and perhaps Applicant intends this to read "based on a set of data obtained from experiments on the plurality types". Correction is requested.

Claims 2 and 10 recite "displaying secondarily clustering results". This is awkward claim language. Perhaps the Applicant intends the claim to read "displaying the results thereof in a form of a dendrogram", as it is clear from the preceding claim language that it is the second step clustering results that are displayed. Correction is requested.

Claim Rejections - 35 USC § 101

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7 and 14 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-7 recite a method for displaying a dendrogram comprising clustering data, selecting subtrees, and displaying results. The method for displaying a dendrogram by clustering data, selecting subtrees, and displaying results, is only a manipulation of data that has already been acquired. In such a case where data are merely stored as to be read or outputted by a computer without creating any functional interrelationship, either as part of the stored data or as part of the computing process performed by the computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. Such descriptive material is not a process, machine, manufacture, or composition of matter (MPEP 2106, IV, 1(b)).

Applicant argues that the additional claim language provides evidence of a practical application of the invention in the technological art of gene expression analysis. However, the added language of grouping biopolymers in the selected subtree into a function unit or function group does not provide such a practical application. The claims still read on merely clustering, selecting, and displaying data that has already been acquired. Thus the claims are non-statutory under 35 USC 101.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 1631

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. *This is a new matter rejection.*

The amendment to claim 1, 8 and dependent claims reciting “grouping biopolymers in the selected subtree into at least one function unit or function group” is not supported in the specification as filed. Applicant is invited to point to specific page and line number for support of the recited claim language.

Claims 8 and 9 recite “displaying on a separate window a subtree selected by a user thereby grouping biopolymers in the selected subtree into at least one function unit or function group”. This constitutes new matter, as there is no support in the specification found for a subtree selected by a user. Applicant is invited to point to specific page and line number for support.

New claims 14 and 15 are drawn to a method for displaying a dendrogram wherein the counting step involves counting synonyms of the respective one of the predetermined keywords and a system for displaying a dendrogram wherein the means for counting and displaying counts synonyms of each of the predetermined keywords, respectively. This is new matter, as the specification does not include any such counting of keyword synonyms. Applicant is invited to point to specific page and line number for support of the recited claim language.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 and dependent claims recite “clustering a plurality types of biopolymers”. It is unclear what is meant by plurality types of biopolymers. Does Applicant intend a method comprising clustering a plurality of biopolymers or some other meaning? Plurality types are not defined in the instant specification. Clarification is requested.

Claim 1 and dependent claims recite “experiments of the plurality types of biopolymers under different condition”. This is unclear in that are the experiments under different conditions or are the plurality types under different conditions. Clarification is requested.

Claim 1 and dependent claims recite “grouping biopolymers in the selected subtree into at least one function unit or function group”. It is unclear what is meant by “function unit” or “function group”. Does this mean that the biopolymers have a particular function in common? What is the difference between a “function unit” and a “function group”?

Claims 5, 6, and 12 are grammatically incorrect and contain multiple errors that render the claims nonsensical. For example, what is meant by “in biopolymer information thereof”? Correction is requested.

Claim Rejections - 35 USC § 103

The art rejections under 35 USC 103 over Eisen et al. in view of Swayne et al. and secondly over WO 99/09218 in view of US 5,895,474 have been withdrawn in view of Applicant's arguments pertaining to the subtree construction and visualization of the claimed dendrogram.

No claims are allowed.

Inquiries

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703) 308-4242, or (703) 308-4028.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D., whose telephone number is (571) 272-0715. The examiner can normally be reached on Monday-Friday from 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward, Ph.D., can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Legal Instrument Examiner, Tina Plunkett, whose telephone number is (703) 305-3524, or to the Technical Center receptionist whose telephone number is (571) 272-0549.

MARJORIE MORAN
PATENT EXAMINER

Lori A. Clow

February 23, 2004
Lori A. Clow, Ph.D.
Art Unit 1631
Lori A. Clow